
CANCER FACTS

National Cancer Institute • National Institutes of Health

Questions and Answers About Early Prostate Cancer

1. What is the prostate?

The prostate is a male sex gland, part of a man's reproductive system. The prostate is about the size of a walnut. It is located below the bladder and in front of the rectum.

2. What is prostate cancer?

Except for skin cancer, cancer of the prostate is the most common malignancy in American men. It is estimated that in 1999 in the United States nearly 179,300 men will be diagnosed with prostate cancer. In the majority of men with prostate cancer, it is very slow growing, and many, if not most, of these men will not die because of the prostate cancer, but rather will live with it until they eventually die of some other cause. Early prostate cancer is localized (confined) to the gland, and the majority of patients with localized prostate cancer have a long survival after diagnosis.

3. Who is at risk for prostate cancer?

All men are at risk. The most common risk factor is age. More than 75 percent of men diagnosed with prostate cancer each year are over the age of 65. African American men have a higher risk of prostate cancer than white Americans. Dramatic differences in the incidence of prostate cancer are seen in different countries, and there is some evidence that a diet higher in animal fat may, in part, underlie these differences in risk. Genetic factors also appear to play a role, particularly for families in whom the diagnosis is made in men under 60 years of age. The risk of prostate cancer rises with the number of close relatives who have the disease.

4. What are the symptoms of prostate cancer?

Prostate cancer often does not cause symptoms for many years. By the time symptoms occur, the disease may have spread beyond the prostate.

When symptoms do occur, they may include:

- Frequent urination, especially at night
- Inability to urinate
- Trouble starting or holding back urination
- A weak or interrupted flow of urine
- Painful or burning urination
- Blood in the urine or semen (the fluid that is released through the penis during orgasm and made up of sperm from the testicles and fluid from the prostate and other sex glands)
- Painful ejaculation (the release of semen through the penis during orgasm)
- Frequent pain or stiffness in the lower back, hips, or upper thighs

These can be symptoms of cancer, but more often they are symptoms of non-cancerous enlargement of the prostate. It is important to check with a doctor.

5. What other prostate conditions can cause symptoms like these?

The above symptoms may be caused by a variety of conditions. As men get older, their prostate may grow bigger and block the flow of urine or interfere with sexual function. This common condition, called benign prostatic hyperplasia (BPH), is not cancer, but can cause many of the same symptoms as prostate cancer. Although BPH may not be a threat to life, it may require treatment with medicine or surgery to relieve symptoms. Again, it is important to check with a doctor.

6. Can prostate cancer be found before a man has symptoms?

Yes. Two tests are commonly used to detect prostate cancer in the absence of any symptoms. One is the digital rectal exam, in which a doctor feels the prostate through the rectum to find hard or lumpy areas. The other is a blood test used to detect a substance made by the prostate called prostate specific antigen (PSA). Together, these tests can detect many silent prostate cancers, those that have not caused symptoms.

Currently, the National Cancer Institute is supporting research to learn more about screening men for prostate cancer. This research will try to determine whether the blood test for PSA along with digital rectal examination can help reduce the death rate from this disease. It will also assess the risks and benefits of screening. At present, it is unclear whether routine screening of men who are not at unusually high risk will prove to save

lives and outweigh the extra surgery, radiation, and complications of therapy for large numbers of patients, many of whom do not have aggressive or life-threatening tumors.

7. How reliable are the two tests?

Neither of the screening tests for prostate cancer is perfect. Most men with mildly elevated PSA do not have prostate cancer, and many men with prostate cancer have normal levels of PSA. Also, the digital rectal exam can miss many prostate cancers.

8. How is prostate cancer diagnosed?

The diagnosis of prostate cancer can be confirmed only by a microscopic examination to identify cancerous prostate tissue. This is done by a biopsy performed in the doctor's office.

Prostate cancer is characterized by both grade and stage. Grade is a term used to describe how closely a tumor resembles normal tissue. Based on the microscopic appearance of a tumor, pathologists (doctors who identify diseases by studying tissues under a microscope) may describe it as low-, medium-, or high-grade cancer. One way of grading prostate cancer, called the Gleason system, uses scores of 2 to 10. Another system uses G1 through G4. The higher the score, the higher the grade of the tumor. High-grade tumors grow more quickly and are more likely to spread than low-grade tumors. Staging of prostate cancer means determining the site and location of the disease. Early prostate cancer, stages 1 and 2, is localized to the prostate gland. Stage 3 prostate cancer is locally advanced outside the gland. Stage 4 prostate cancer has spread to other organs or tissues.

9. How is localized prostate cancer treated?

There are three generally accepted options for treatment of patients with localized prostate cancer: radical prostatectomy, radiation therapy, and surveillance (also called watchful waiting).

Radical prostatectomy is a surgical procedure to remove the entire prostate gland and nearby tissues. Sometimes lymph nodes in the pelvic area (the lower part of the abdomen, located between the hip bones) are also removed. Radical prostatectomy may be performed using a technique called nerve-sparing surgery that may prevent damage to the nerves needed for an erection and prevent damage to the opening of the bladder.

Radiation therapy involves the delivery of radiation energy to the prostate. The energy is usually delivered in an outpatient setting using an external beam of radiation. The energy can also be delivered by placing radioactive seeds in the prostate during a surgical procedure.

A third option, surveillance, is recommended by doctors for some patients, particularly those who are older or have other medical conditions that are likely to compromise their

health. These patients are followed with regular examinations. If there is evidence of cancer growth, active treatment may be recommended.

10. How does a patient decide what is the best treatment option for localized prostate cancer?

Choosing a treatment option involves the patient and his family and doctor. Considerations include the grade and stage of the cancer, the patient's age and health, and the individual choices that each patient makes about the benefits and risks of each treatment option. Because there are several reasonable treatment options for most patients, the decision can be difficult. Patients may hear different opinions and recommendations. They should try to get as much information as possible. There is rarely a need to make a decision without time to understand the pros and cons of various approaches.

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Sources of National Cancer Institute Information

Cancer Information Service

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

NCI Online

Internet

Use <http://www.cancer.gov> to reach NCI's Web site.

CancerMail Service

To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word "help" in the body of the message.

CancerFax® fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

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